DOCUMENT RESUME

ED 331 874 TM 016 422

AUTHOR Smith, Douglas K.; And Others
TITLE The Early Screening Profiles: A Stability Study.
PUB DATE Mar 91
NOTE 10p.; Paper presented at the Annual Meeting of the National Association of School Psychologists (Dallas, TX, March 1991).
PUB TYPE Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cognitive Development; Early Childhood Education; Language Acquisition; Motor Development; *Profiles; School Readiness Tests; Scores; *Screening Tests; Social Development; *Test Reliability; *Young Children
IDENTIFIERS *Coefficients of Stability; *Early Screening Profiles; Pearson Product Moment Correlation; Test Retest Reliability

ABSTRACT

Stability of the Early Screening Profiles (ESP), developed by P. Harrison, was examined with a sample of 23 non-handicapped preschool children (14 females and 9 males) ranging in age from 3 years 0 months to 6 years 0 months at the time of initial testing. The sample was drawn from a rural/suburban community in the midwest with a predominantly middle socioeconomic level. Each child was tested with the ESP by examiners trained in its administration. Retesting occurred an average of 10 months after initial testing, with a range of 5 to 15 months. The ESP is a nationally normed screening battery for children ages 2 years 0 months through 6 years 11 months. The battery measures development in cognitive, language, motor, and self-help/social areas and provides standard scores with means of 100 and standard deviations of 15. Pearson product moment correlations were computed and produced the following stability coefficients: (1) a cognitive profile of 0.54; (2) a language profile of 0.49; (3) a motor profile of 0.51; (4) an expressive language profile of 0.47; and (5) a receptive language profile of 0.44. Two tables present the profile stability data. (Author/SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED331874

The Early Screening Profiles:

A Stability Study

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

DOUGLAS K. SMITH

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Douglas K. Smith

Michael J. Lasee

Kari A. Hastad

Leonard Ouradnik

School Psychology Program

University of Wisconsin-River Falls

BEST COPY AVAILABLE

Paper presented at Annual Meeting of National Association of School Psychologists, Dallas, March 1991.

Running Head: ESP Stability

TM016422

Abstract

Stability of the Early Screening Profiles (ESP) was examined with a sample of 23 children (14 females and 9 males) ranging in age from 3 years, 0 months to 6 years, 0 months at time of initial testing. The sample was from a rural/suburban community in the midwest and from a predominantly middle socioeconomic level. Each child was tested with the ESP by examiners trained in the administration of the battery. Re-testing occurred on average 10 months after initial testing with a range of 5 months to 15 months. The ESP is a nationally normed screening battery for children ages 2 years, 0 months through 6 years, 11 months. The battery measures development in cognitive, language, motor and self-help/social areas and provides standard scores with means of 100 and standard deviations of 15. Pearson product moment correlations were computed and produced these stability coefficients: Cognitive Profile = .54 ($p < .01$); Language Profile = .49 ($p < .01$); Motor Profile = .51 ($p < .01$; Expressive Language = .47 ($p < .05$) and Receptive Language = .44 ($p < .05$).

With the increased emphasis on preschool assessment, many new instruments for the assessment of preschool children's abilities and skills have been developed. The Early Screening Profiles (ESP; Harrison, 1990) is an example. This nationally normed screening battery for children ages 2 years, 0 months through 6 years, 11 months measures cognitive, language, motor and self-help/social development. In addition to direct measures of skills in these areas, questionnaires are completed by parents, teachers and screening examiners. The battery produces Cognitive and Language Profiles consisting of four subtests (Verbal Concepts, Visual Discrimination, Logical Relations and Basic School Skills), a Motor Profile consisting of two subtests (Gross Motor and Fine Motor) and a Self-Help/Social Profile consisting of four domains (Communication, Daily Living Scale, S alization and Motor). Separate scores for Expressive Language and Receptive Language Areas are determined from performance on receptive and expressive items of Verbal Concepts and Basic School Skills subtests. Standard scores with a mean of 100 and standard deviation of 15 are provided for each measure. Actual testing time ranges from 15 to 30 minutes. In addition, the parent and teacher questionnaires are completed in 10 to 15 minutes.

The Cognitive/Language subtests are administered from an easel-format. Sample items are used to communicate the task. The Visual Discrimination subtest involves the child pointing to pictures that match stimulus pictures. In Verbal Concepts the child points to pictures of objects named or described by the examiner, and names objects pictured or described by the examiner. The Logical Relations

subtest requires the child to point to pictures that correspond to stimulus pictures and to solve visual analogies. In Basic School Skills the child answers questions about number and quantity concepts, and names and recognizes number, letters and words.

Items on the Gross Motor subtest assess the use of legs and arms for movement and coordination, while items on the Fine Motor subtest evaluate the use of hands and fingers for manipulating objects.

The standardization sample for the ESP was based on 1990 census estimates and stratified on the basis of sex, race or ethnic group, community size, region of the country, and parents' level of education. The sample consisteed of 1149 children with 76 to 172 children in each of 10 half-year groups between 2 years, 0 months and 6 years, 11 months of age.

Purpose of the Study

An important element of reliability for a new test is the stability of scores obtained on the test. This is especially true for measures of young children's abilities as much growth in skills may occur in relatively short periods of time. It is important to know how stable such measures actually are. Therefore, the purpose of the present study was to investigate the stability of the ESP for a sample of nonhandicapped, preschool children.

Method

Subjects

The sample consisted of 23 children (14 females and 9 males) ages 3 years, 0 months through 6 years, 0 months with a mean age of 4 years, 10 months at time of original testing. The sample was from a rural/suburban, midwestern area and from a predominantly middle class socioeconomic status.

Procedure

Each child was evaluated with the ESP by examiners trained in the administration of the battery. Re-testing occurred on average 10 months after the initial testing with a range of 5 to 15 months.

Results and Discussion

Mean scores were in the average range for both test and retest. Initial testing indicated a range of mean profile scores from 104.97 on the Motor Profile to 106.70 on the Language Profile. On retesting mean profile scores ranged from 104.67 on the Language Profile to 113.14 on the Motor Profile. Gain scores ranged from 8.17 on the Motor Profile to -3.15 in the Receptive Language Area. These results as well as the stability coefficients are presented in Table 1.

Insert Table 1 about here

Subtest scores were all in the average range at both test and retest. These scores ranged from 101.80 to 109.53 for initial testing and from 99.90 to 109.30 for retesting. Gain scores ranged from -2.80 to 3.80. These results as well as stability coefficients are reported in Table 2.

Insert Table 2 about here

All stability coefficients for profile and area scores are statistically significant and fall in the moderate range. As expected they are somewhat lower than test-retest coefficients that have been previously reported (Smith, Lasee & McCloskey, 1990). The test-retest coefficients ranged from .70 to .93. Although the stability coefficients for the Cognitive Profile is the highest ($r = .61$), it is not significantly different from the lowest coefficient (Receptive Language with $r = .53$).

Greater variability is noted among the subtest stability coefficients. The skills measured by Logical Relations and Basic School Skills subtests, especially, may be more fluid at this age. Both subtests include items that are dependent on formal and/or informal learning experiences. Consequently, they may well be dependent on the experiences of a particular child, and thus, reflect less stability than the other subtests. Verbal Concepts and Visual Discrimination demonsrated the highest stability coefficients, and thus, appear to measure more stable skills at this age than the other subtests.

These results indicate that the ESP profile and area scores are sufficiently stable to be used in the screening process, which is a major purpose of the battery. Use of the test results in a diagnostic way to develop intervention programs should be pursued cautiously as the stability coefficients demonstrate that many of the skills measured by the ESP are somewhat fluid at this age range. Additionally, the sample size of 23 is limited and additional studies are needed to confirm these results.

As a screening instrument the ESP provides an index of a child's development in important skill areas in a minimum amount of time. It lends itself to administration in a number of diverse settings including preschool programs, day care centers and as part of early childhood screening programs. Studies to date indicate that the ESP is a reliable and stable measure of preschool children's abilities and skills.

References

Harrison, P. (1990). AGS Early Screening Profiles. Circle Pines, MN: American Guidance Service.

Smith, D., Lasee, J., and McCloskey, G. (1990). Test-retest reliability of the AGS Early Screening Profiles. Paper presented at Annual Meeting of National Association of School Psychologists, San Francisco.

Table 1

Profile stability data

	Standard Scores					
	Mean	SD	Mean	SD	Gain Score	r
Cognitive Profile	105.20	11.15	106.20	10.96	1.00	.54(.61)*
Language Profile	106.70	10.79	104.67	10.88	-2.03	.49(.56)**
Motor Profile	104.97	11.03	113.14	12.70	8.17	.51(.56)**
Expressive Language	105.00	10.56	103.33	10.23	-1.67	.47(.56)**
Receptive Language	105.90	11.07	102.75	9.94	-3.15	.44(.53)**

Note. Gain score = mean standard score for second testing minus mean from first testing

n = 23

r = Pearson correlation between standard scores. Value in parentheses is the Pearson correlation corrected for restriction of the standard score range obtained by the test-retest sample.

* $p < .001$; ** $p < .01$

Table 2

Subtest stability data

	Standard Scores					
	Mean	SD	Mean	SD	Gain Score	r
Verbal Concepts	109.53	10.70	109.30	14.76	- .23	.66(.72)*
Visual Discrimination	101.80	10.47	103.80	12.81	2.00	.56(.62)**
Logical Relations	102.30	13.83	106.10	12.79	3.80	.24(.27)
Basic School Skills	102.70	10.69	99.90	9.48	-2.80	.41(.50)**
Receptive Language	105.90	11.07	102.75	9.94	-3.15	.44(.53)**

Note. Gain score = mean standard score for second testing minus mean from first testing

n = 23

r = Pearson correlation between standard scores. Value in parentheses is the Pearson correlation corrected for restriction of the standard score range obtained by the test-retest sample.

* $p < .001$; ** $p < .01$